

Special Issue

Advanced Biomaterials for Medical Implants

Message from the Guest Editors

The use of biomedical materials as well as artificial implants has changed modern medicine. From cardiovascular stents through dental implants to joint replacements, these medical devices have considerably revolutionized the quality of life for millions of people around the world. However, the ability to integrate into the human body and operate correctly while avoiding adverse reactions or complications is paramount for the success of such implants. One way to enhance their performance is by using surface modifications or biomaterials.

This Special Issue aims at presenting the latest research results on material- or surface-related approaches to solve cell biological, mechanical and biotribological challenges in medical implant technology. Contributions from both academic and medical researchers are welcome. The submissions should either present new findings in the field or provide deep insights into the development or application of advanced material- or surface-related approaches to solve cell biology, mechanics or biotribology-related problems related to friction, lubrication, wear and service life as well as the peri-implant environment.

Guest Editors

Dr. Benedict Rothammer

Engineering Design, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Martensstr. 9, 91058 Erlangen, Germany

Prof. Dr. Max Marian

1. Institute of Machine Design and Tribology (IMKT), Leibniz University Hannover, An der Universität 1, 30823 Garbsen, Germany
2. Department of Mechanical and Metallurgical Engineering, School of Engineering, Pontificia Universidad Católica de Chile, Vicuña Mackenna 4860, Macul 6904411, Región Metropolitana, Chile

Deadline for manuscript submissions

31 December 2025



Journal of Functional Biomaterials

an Open Access Journal
by MDPI

Impact Factor 5.2
CiteScore 6.8
Indexed in PubMed



mdpi.com/si/244496

Journal of Functional Biomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jfb@mdpi.com

mdpi.com/journal/

[jfb](#)





Journal of Functional Biomaterials

an Open Access Journal
by MDPI

Impact Factor 5.2
CiteScore 6.8
Indexed in PubMed



[mdpi.com/journal/](https://mdpi.com/journal/jfb)

[jfb](https://mdpi.com/journal/jfb)



About the Journal

Message from the Editor-in-Chief

The biomaterials field is one of the largest and fastest growing research areas both in the scientific community and in the industrial one. Biomaterials are the result of collaborations between different disciplines: chemistry, medicine, pharmacology, engineering and biology. The objective of this collaboration is to lead to the implementation of new devices to restore form and human body functions. The mission of the *Journal of Functional Biomaterials (JFB)* is to focus attention on physico-chemical characteristics and their importance in the interactions between biomaterials and living tissues. *JFB* seeks to publish studies on the preparation, performance and use of biomaterials in biomedical devices, as well as regarding their behavior in physiological environments. We are pleased to welcome you as our authors.

Editor-in-Chief

Prof. Dr. Pankaj Vadgama

School of Engineering and Materials Science, Queen Mary University of London, London, UK

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, Ei Compendex, Inspec, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Engineering, Biomedical) / CiteScore - Q2 (Biomedical Engineering)